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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/523,971	02/08/2005	Alexander Theil	265012US0PCT	1582
22850	7590	08/10/2007		
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER SASTRI, SATYA B	
			ART UNIT 1713	PAPER NUMBER
			NOTIFICATION DATE 08/10/2007	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/523,971	<b>Applicant(s)</b> THEIL ET AL.	
	<b>Examiner</b> Satya B. Sastri	<b>Art Unit</b> 1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 29 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 8-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This action is in response to applicant's amendment filed on May 29, 2007. Claims 1-6, 8-21 are now pending in the application.

2. In view of applicant's amendment, all previous rejections are withdrawn. Additionally, new rejections are set forth below.

#### ***Claim Objections***

3. Claims 1, 10 are objected to because the claim language is confusing for the following reasons:

The phrase "based on the rubber phase of the impact modifier" is confusing because it appears to suggest the weight basis for the impact modifier. Additionally, it is also not clear if the amount of the impact modifier is based on the PMMA molding composition or the sanitary material. Lastly, the phrase "PMMA molding composition comprises methyl methacrylate" suggests that monomers are present in the composition. Applicants may amend the language to recite "as polymerized units" or an equivalent phrase.

#### ***Previously Cited Statutes***

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

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5. Claims 1-6, 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rostami (WO 00/29480).

At the outset, it is noted that WO 00/29480 is used for date purposes. US 6,689,832 B1 is used as the English language equivalent of WO 00/29480 in the rejection set forth below.

Rostami discloses methacrylate molding composition comprising 20-89% wt. of an acrylic polymer containing 50-99% by wt. of methyl methacrylate units and 1-50% by wt. of a copolymerizable alkyl acrylate (abstract, col. 2, lines 6-15). The acrylic copolymer has a molecular wt. between 60,000 and 180,000 (col. 2, lines 28-35). The mixture may also contain other additives, such as stabilizers, toughening agents etc. Suitable toughening agents include rubbers, present in amounts of 1-50%, more preferably, from 3-25% by wt. (col. 2, lines 58-65). The shaped article may be formed by melt molding methods such as extrusion and injection molding (col. 3., lines 1-27). The prior art also discloses that acrylic sheet materials are particularly useful for forming bathtubs, architectural cladding, shower enclosures, paneling etc. (col. 1, lines 8-15).

Rostami does not explicitly disclose a PMMA molding composition (a) comprising methyl methacrylate and up to 4% by wt. of vinyl comonomers and (b) MW range of 130,000 to 190,000 g/mol.

Although Rostami does not disclose the specific PMMA molding composition, it discloses an acrylic polymer containing 50-99% by wt. of methyl methacrylate units and 1-50% by wt. of a copolymerizable alkyl acrylate. With regard to the mol. wt. range, Rostami discloses a range of 60,000 and 180,000. Additionally, toughening agents, such as rubbers, are present in amounts of 1-50%, more preferably, from 3-25% by wt. Given that the prior art discloses a

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PMMA with an overlapping range of methyl methacrylate units, with an end point of 99% by wt. of methyl methacrylate units explicitly disclosed, and given that there is a substantial overlap in the disclosed and the presently claimed MW range and in the amount of toughening agent used, it would have been obvious to one of ordinary skill in the art to include a PMMA that has the amount of methyl methacrylate units and MW within the presently claimed range, in combination with a toughening agent and thereby arrive at the presently cited claims.

It is the examiner's position that the product must inherently have the physical properties of semifinished appearance and resistance to hot water as recited in present claims.

With regard to claim 10, it is recognized that the phrase "consisting essentially of" narrows the scope of the claims to the specified materials and those which do not materially affect the basic and novel characteristics of the claimed invention. However, absent a clear indication of what the basic and novel characteristics are, "consisting essentially of" is construed as equivalent to "comprising". Further, the burden is on the applicant to show that the additional ingredients in the prior art, i.e. 10-80 wt.% of a mineral filler, would in fact be excluded from the claims and that such ingredients would materially change the characteristics of the applicant's invention, See MPEP 2111.03.

6. Claims 11-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rostami (WO 00/29480) in view of Fraser et al. (US 6,172,135 B1).

The discussion with regard to Rostami in paragraph 5 above incorporated herein by reference.

Rostami is silent with regard to the composition of the impact modifier although it discloses that core-shell particle toughening agent made from butyl acrylate and methyl methacrylate may be used in the methacrylate molding compositions.

Prior art to Fraser et al. discloses impact modified (meth)acrylic copolymers, such as poly(methyl methacrylate), comprising core-shell particles (col. 1, lines 4-10). The core contains a first (meth)acrylic copolymer, preferably containing 80-99% by wt. of methyl methacrylate and 1-20% by wt. of alkyl acrylate such as ethyl and/or butyl acrylate. The first shell comprises a low Tg polymer comprising 0 to 25% by wt. of styrenic monomer and 75-100% by wt. of a (meth)acrylic monomer such as butyl acrylate and dodecyl methacrylate. The second and third shells are preferably made of first (meth)acrylic copolymer (col. 3, lines 45-67, col. 4, lines 1-20, The multistage core-shell particles are spherical in shape with an overall diameter of 270 to 300 nm (col. 4, lines 27-34).

The composition of the presently claimed impact modifier reads on the working example in col. 9 (line 25-30, claims 1-3). It is noted that 6% of butyl acrylate is recited in the claim language even though the example recites butyl methacrylate.

It would have been obvious to one of ordinary skill in the art to include the core-shell impact modifier of Fraser et al. in the compositions of Rostami and thereby arrive at the presently cited claims because Fraser et al. teach that molding articles containing such impact modifiers exhibit improved impact resistance compared with conventional multistage core-shell particles (abstract, col. 2, lines 54-59).

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Given that the composition as claimed instantly is obvious over the combined teachings of Rostami and Fraser et al., the properties as recited in claims 16 and 17 must be intrinsic to the composition.

With regard to process of claim 20, the primary reference discloses a process of forming a shaped article such as a bathtub or shower enclosure by melt molding techniques such as extrusion and injection molding (col. 3, lines 1-27, col. 1, lines 8-15).

### ***Response to Arguments***

7. With regard to applicant's arguments that Rostami compositions necessarily contain mineral filler in amounts of 10-80% by wt., it is noted that the sanitary material as well as the PMMA molding composition of instant claims recite the transitional phrase "comprised/comprises" and thus do not necessarily exclude other components in the composition.

Moreover, the statement that mineral fillers are excluded from applicant's invention is a conclusory statement with no evidentiary weight, i.e., attorney's statements are not a substitute for factual evidence. With regard to claim 10, it is noted that case law holds that "[i]f an applicant contends that additional steps or material in the prior art are excluded by the recitation of 'consisting essentially of,' applicant has the burden of showing that the introduction of additional steps or components would materially change the characteristics of applicant's invention." *In re De Lajarte*, 337 F.2d 870, 143 USPQ 256 (CCPA 1964). Applicant is advised

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to submit clear and convincing evidence in the form of a declaration that mineral filler would materially affect the basic and novel characteristics of applicant's invention.

As for the teachings on the mol. wt. range, applicants contend that Rostami describes a preferred mol. wt. of only 90,000 to 120,000. It is noted that the disclosure teaches a broad range of 60,000 to 180,000. It is well established that a reference is available for all it teaches including nonpreferred embodiments as for instance is discussed in M.P.E.P. § 2123.

***Action Is Final***

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

***Future Correspondence***



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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Satya Sastri whose telephone number is 571-272-1112. The examiner can be reached on Wednesdays and Fridays, 7AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 571-272-1114. The fax phone numbers for the organization where this application or proceeding is assigned is (571) 273-8300 for regular communications. The unofficial direct fax phone number to the Examiner's desk is 571-273-1112.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
SATYA SASTRI

August 6, 2007

  
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